Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1) Please cancel claims 5 and 13 without prejudice or disclaimer of the subject matter thereof.

2) Please amend claims 1, 3, 4, 7-9, 11, 12, 14-17 and 20.

3) Please add new claims 21 and 22.

Listing of Claims:

Claim 1 (Currently amended): A method of operating luminaries, said method comprising the steps of:

providing one or more fluorescent tubes that contain mercury vapor gas and at least one electrode ~~including heating filament cathodes~~ located at ends of the fluorescent tubes, a fixture that comprises holding and connection devices for the fluorescent tubes, and a ballast for driving the fluorescent tubes, each of the electrodes includes heating filament cathodes;

applying voltage pulses to the electrodes for exciting the mercury vapor gas, the pulses consisting of non periodic voltage levels separated by variable duration dead times being of alternative form including amplitudes of equal values but of positive and negative polarity; ~~and~~

producing alternative voltage pulses from the ballast[[.]]; and

using the ballast to activate special couplings of connection/fixation on each end of the fluorescent tubes, the special couplings being configured to short cut the filaments of the electrodes of the fluorescent tubes respectively, to cancel current through the electrodes, and to thus avoid the losses in voltage.

Claim 2 (Cancelled).

Claim 3 (Currently amended): The method according to claim 1 further comprising the step of ~~monitoring~~ using a programmed algorithm of the ballast to monitor the voltage signals ~~as well as~~ and the dead times ~~by the ballast using means of a programmed algorithm~~.

Claim 4 (Currently amended): The method according to claim 1, wherein the ballast monitors each dead times duration according to real time samplings of ~~the~~ current crossing the mercury vapor gas in the fluorescent tubes.

Claim 5 (Cancelled).

Claim 6 (Previously presented): The method according to claim 1 further comprising the step of igniting conduction through the mercury vapor gas of the fluorescent tubes by the temporary connection of a capacitor making it possible to increase tension between the electrodes of each fluorescent tube, and to disconnect ~~that~~ the capacitor ~~is disconnected~~ as soon as conduction is obtained.

Claim 7 (Currently amended): The method to according to claim 6 further comprising the step of using the ballast to modify ~~modifying the~~ current level crossing the mercury vapor gas ~~by the ballast~~, so ~~the~~ current crossing the capacitor is minimized before the disconnection of the capacitor.

Claim 8 (Currently amended): The method according to claim 1 further comprising the step of communicating the ballast with a remote central control unit through at least one of a wired link, and a wireless link for performance monitoring and remote failure detection.

Claim 9 (Currently amended): A luminary for fluorescent tubes, the luminary comprising:

one or more fluorescent tubes that contain mercury vapor gas and at least one electrode ~~including heating filament cathodes~~ located at ends of the fluorescent tubes, each of the electrodes includes heating filament cathodes;

a fixture at each end of the tube fluorescent tubes that comprises holding and connection devices for the fluorescent tubes, each of the fixtures being configured to short cut the filament cathodes of the electrodes of the fluorescent tubes respectively, to cancel current through the electrodes, and to thus avoid the losses in voltage; and

a ballast for driving the fluorescent tubes, the ballast ~~is~~ being configured to generate voltage pulses applied to the electrodes for exciting the mercury vapor gas, the pulses consisting of non periodic voltage levels separated

by variable duration dead times being of alternative form including amplitudes of equal values but of positive and negative polarity.

Claim 10 (Cancelled).

Claim 11 (Currently amended): The luminary according to claim 9, characterized in that the ballast produces the voltage pulses ~~as well as dead time~~ and the dead times by means of programmed algorithms.

Claim 12 (Currently amended): The luminary according to claim 9, characterized in that the ballast is configured to monitor each dead time duration according to real time samplings of ~~the~~ current through the mercury vapor gas in the fluorescent tubes.

Claim 13 (Cancelled).

Claim 14 (Currently amended): The luminary according to claim [[9]]13 further comprising a capacitor connected between the special couplings to increase the voltage between the electrodes of each fluorescent tube in order to start conduction through the mercury vapor gas, the capacitor being disconnected as soon as conduction is obtained.

Claim 15 (Currently amended): The luminary according to the claim 14, characterized in that the ballast is configured to modify the current crossing ~~of~~ the mercury vapor gas when conduction is obtained, so that ~~the~~ current in the capacitor is reduced ~~at its~~ to a lowest level of the capacitor before the disconnection of ~~such~~ the capacitor.

Claim 16 (Currently amended): The luminary according to claim 9, characterized in that the ballast includes at least one of a wire, and a wireless connection enabling the ballast to communicate with a remote control unit for performance monitoring and remote failure detection.

Claim 17 (Currently amended): The luminary according to claim 9, characterized in that the ballast includes at least two parts;

a first part being a standard ballast functioning with a main sector; and

a second part being a specifically assembled part to work with the non periodic pulses of the ballast.

Claims 18 and 19 (Cancelled).

Claim 20 (Currently amended): A method of operating a fluorescent tube for reducing an operating temperature the fluorescent tube and improving electronic ballast reliability, said method comprising the steps of:

providing at least one fluorescent tube containing a ~~fluorescent~~ mercury vapor gas, at least one electrode including at least one heating filament cathode located at each end of the fluorescent tube, a fixture that comprises holding and connection devices for the fluorescent tube at each end, and a ballast for driving the fluorescent tube;

producing non periodic voltage pulses from the ballast;

applying the non periodic voltage pulses to the electrodes for exciting the ~~fluorescent~~ mercury vapor gas, the non periodic pulses are separated by variable duration dead times being of alternative form including amplitudes of equal values but of positive and negative polarity;

igniting conduction through the ~~fluorescent~~ mercury vapor gas of the fluorescent tube by the temporary connection of a capacitor in parallel with the fluorescent tube making it possible to increase tension between the electrodes of the fluorescent tube;

disconnecting the capacitor when conduction is obtained;

controlling a pre-heating of the cathodes of the electrodes until a predetermined optimal operation is reached due to a controlled and specific excitation during the ~~ignition of~~ igniting conduction ~~of~~ through the ~~fluorescent~~ mercury vapor gas indifferent to temperature in the fluorescent tube;

monitoring current flowing through the fluorescent tube for determining a resonance effect, thereby allowing the ballast to monitor a voltage waveform of the fluorescent tube in real time;

regulating the dead time according to at least one programmed function that ~~supervise~~ supervises the conditions and physical parameters coupling voltage variations and collision rate between electrons and mercury atoms;

allowing the igniting of conduction to continue until a predetermined nominal running mode is reached;

allowing the current crossing the fluorescent tube and emission of light from the fluorescent tube to increase by successive steps;

allowing the current to decrease until a phenomenon of resonance is stable according to environmental conditions, the phenomenon of resonance being a resonance effect in the mercury vapor gas that increases a number of collisions between the electrons and the mercury atoms; and

increasing the number of collisions between electrons and mercury atoms by depending current intensity on the resonance effect in the ~~fluorescent~~ mercury vapor gas.

Claim 21 (New): The method according to claim 20, wherein each fixture is configured to short cut the filament cathodes of the electrodes of the fluorescent tube, to cancel current through the electrodes, and to thus avoid losses in voltage.

Claim 22 (New): The method according to claim 20 further comprising the steps of:

inserting the fixture in place of an original fluorescent tube connector respectively; and

connecting the ballast to a main power supply bus, while leaving in place an original ballast and starter.